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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/916,011	07/26/2001	Cristian A. Bolle	12	8117

7590 09/01/2004

Docket Administrator (Room 3J-219)
Lucent Technologies Inc.
101 Crawfords Corner Road
Holmdel, NJ 07733-3030

EXAMINER

EDWARDS, LAURA ESTELLE

ART UNIT	PAPER NUMBER
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1734

DATE MAILED: 09/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

AS

Office Action Summary	Application No.	Applicant(s)	
	09/916,011	BOLLE, CRISTIAN A.	
	Examiner	Art Unit	
	Laura E. Edwards	1734	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) 21-31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>031802</u> | 6) <input type="checkbox"/> Other: _____ |

Election/Restrictions

Applicant's election with traverse of Group I, claims 1-20 in the reply filed on 6/4/04 is acknowledged. The traversal is on the ground(s) that new claims 30 and 31 link all the inventions of Groups I-III such that all the inventions can be searched together and no extra work is required of the Examiner. This is not found persuasive because new claims 30 and 31 do not link all the claimed inventions. Applicant has merely added process limitations to depend from a product claim. Those added process limitations do not further limit the product. Regardless, the search for the different methods of Groups I and III along with the product of Group II would place an undue burden on the Examiner.

The requirement is still deemed reasonable, proper, and is therefore made FINAL.

Claim Rejections - 35 USC § 112

Claims 2, 3, and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 2 and 3, line 2, "said combined substrate" lacks antecedent basis.

In claim 20, line 2, it is unclear what is meant by the phrase, "at least one two".

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

Art Unit: 1734

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al (USPAP 2002/0094419) in view of Aoki et al (US 5,479,049).

Lin et al teach a method for making at least one micro lens comprising the steps of depositing or flowing a first substance on a substrate, coating the coated substrate with a second substance flowed thereon, each of the coatings on the substrate being a predetermined width, shape, or pattern (see col. 1, [0011]); exposing said coated substrate to heat conditions which cause the substances to flow; whereby the product formed is of a micro lens shape without requiring formation of a mesa (See Example 1). Lin et al are silent concerning the use of an adhesion promoter. However, it was known in the art at the time the invention was made to provide an adhesion promoter (HMDS) layer between a micro lens and adjoining layers as evidenced by Aoki et al (see col. 5, lines 39-48). It would have been obvious to one of ordinary skill in the art to provide an adhesion promoter layer as taught by Aoki et al between the first substance and the second substance in the Lin et al process in order to provide better adherence between the adjoining layers.

Art Unit: 1734

With respect to claim 2, Aoki et al recognize etching or vapor phase coating with the HMDS such that one of ordinary skill in the art would expect to apply the first coating to the substrate followed by etching or vapor-phase coating in the Lin et al micro lens manufacturing process.

With respect to claim 3, Lin et al in Example 1 recognize plural stages of baking or heating.

With respect to claim 6, Lin et al recognize the use of a photo resist in col. 1, lines 11-12 in [0011].

With respect to claims 7 and 8, the combined teachings of Lin et al and Aoki et al would result in an adhesion-coating layer covering any surface area of the coated substrate that would come in contact with an adjoining coating or surface layer.

With respect to claims 11 and 12, Lin et al recognize preconditioning or pretreating of the substrate to be coated via preheating or baking at a high temperature for a period of time (see Example 1).

With respect to claim 13, a micro lens array is formed via the formation of a line of micro lenses.

Claims 15 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al (USPAP 2002/0094419).

Lin et al teach a method for making at least one micro lens comprising the steps of depositing or flowing a first substance on a substrate, coating the coated substrate with a second prescribed coating material or substance flowed thereon, each of the coatings on the substrate

Art Unit: 1734

being a predetermined width, shape, or pattern (see col. 1, [0011]); exposing said coated substrate to heat conditions which cause the substances to flow; whereby the product formed is of a micro lens shape without requiring formation of a mesa (See Example 1). Lin et al do not explicitly teach that the prescribed coating material is flowed on the first substance and the immediate surroundings of the substrate. However, because the prescribed coating material is applied to the coated substrate in a desired width, shape, or pattern, one of ordinary skill in the art would expect that the first substance and its immediate surroundings would be coated with the prescribed coating material in accordance with the desired width, shape, or pattern along with the exposed heating conditions.

With respect to claim 18, Lin et al recognize the use of a photo resist in col. 1, lines 11-12 in [0011].

With respect to claims 19, and 20, at least one micro lens array is formed via the formation of a line of micro lenses.

Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al (USPAP 2002/0094419) as applied to claims 15 and 18-20 above, and further in view of Aoki et al Aoki et al (US 5,479,049).

The teachings of Lin et al have been mentioned above but Lin et al fail to teach or suggest the use of an adhesion promoter (HMDS). However, it was known in the art at the time the invention was made to provide an adhesion promoter (HMDS) layer between a micro lens and adjoining layers as evidenced by Aoki et al (see col. 5, lines 39-48). It would have been obvious to one of ordinary skill in the art to provide an adhesion promoter layer as taught by

Art Unit: 1734

Aoki et al between the first substance and the second substance in the Lin et al process in order to provide better adherence between the adjoining layers.

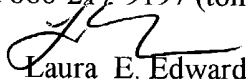
Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents disclose methods for forming micro lens arrays: Hayes (US 5,498,444), Aoyama et al (US 5,536,455), and Feldblum et al (US 5,286,338).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura E. Edwards whose telephone number is (571) 272-1227. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Fiorilla can be reached on (571) 272-1187. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Laura E. Edwards
Primary Examiner
Art Unit 1734

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August 30, 2004